

Notice of Allowability

Application No.

10/533,853

Examiner

Faye Boosalis

Applicant(s)

OKADA ET AL.

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 20 February 2007.
2. ☒ The allowed claim(s) is/are 1-4 and 6-10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 4/2/07
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☐ Notice of Informal Patent Application
- ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
- ☐ Examiner's Amendment/Comment
- ☒ Examiner's Statement of Reasons for Allowance
- ☐ Other _____

EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

Comment on Submissions

1. This communication is responsive to submissions 20 February 2007.
2. The amendment filed 20 February 2007 has been entered.

Allowable Subject Matter

3. Claims 1-4 and 6-10 are allowed
4. Claim 5 is cancelled.

The following is an examiner's statement of reasons for allowance:

Regarding independent claims 1, 6 and 10, the prior art does not disclose or fairly suggest a method or imaging device comprising an optical system means that provides a focal length which increases according to wavelengths of light from short-wavelength visible light to near infrared light in different wavelength regions (i.e. red, blue, green, IR) severally form images at different location according to their wavelengths.

The examiner notes that while it is known in the art for an imaging device comprising: an imaging element which has a plurality of pixels; wherein the plurality of pixels include pixels having a visible light detection means, the visible light detection means detecting three components (42B)(42G)(42R) of visible light which form images at different depths according to their wavelengths (see for example Nozaki et al – US 4,677,289 -- Fig. 4), the near infrared light detection means detecting near infrared light (42IR) which forms an image in a pixel at a location of depth different from the depths (42B)(42G)(42R) of visible light form images (see for example Nozaki et al – US

4,677,289 -- Fig. 4 and col. 8, lines 21- col. 9, line 16) and an image processing apparatus for processing visible image information and invisible image information comprising: a focusing optical system to correct partial magnification of invisible image information to match visible image information such that both images are at optimal focus (see for example Hayashide et al – US 2002/0131648 A1 – paragraphs [0009]-[0010] and [0031]-[0031]), the prior art does not suggest focal length wavelength or depth dependent color imaging system comprising an optical system means of increasing the focal length, from visible light to near infrared light in different wavelength regions, to form images at different locations according to their wavelengths. The remaining claims 2-4 and 7-9 are allowable based on their dependency.

Conclusion


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye Boosalis whose telephone number is 571-272-2447. The examiner can normally be reached on Monday thru Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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